

REMARKS

In the Office Action dated September 28, 2006, claims 8 and 18 were rejected under 35 U.S.C. § 112, ¶ 2; claims 1-26 were rejected under § 101; claims 1, 2, 12, and 13 were rejected under § 102 over U.S. Patent No. 6,353,828 (Ganesh); claims 3-5, 14, and 15 were rejected under § 103 over Ganesh in view of U.S. Patent Application Publication No. 2005/0108231 (Findleton); claims 6 and 16 were rejected under § 103 over Ganesh in view of Findleton and U.S. Patent No. 6,574,717 (Ngai), and over Ganesh in view of Findleton and U.S. Patent Application Publication No. 2005/0131966 (Lou); claims 7 and 17 were rejected under § 103 over Ganesh in view of Findleton in view of U.S. Patent Application Publication No. 2004/0254933 (Ho); claims 8 and 18 were rejected under § 103 over Ganesh in view of U.S. Patent No. 6,581,205 (Cochrane); claims 9 and 10 were rejected under § 103 over Ganesh in view of U.S. Patent No. 6,754,657 (Lomet) and U.S. Patent No. 5,940,828 (Anaya); claim 11 was rejected under § 103 over Ganesh in view of Lomet, Anaya, and U.S. Patent No. 5,442,785 (Roffe) and under § 103 over Ganesh in view of Lomet, Anaya, and U.S. Patent Application Publication No. 2002/0133494 (Goedken); claims 19 and 20 were rejected under § 103 over Ganesh in view of U.S. Patent No. 6,889,159 (Klotz); claim 21 was rejected under § 103 over Ganesh in view of Klotz and Ngai and under § 103 over Ganesh in view of Klotz and Lou; claim 22 was rejected under § 103 over Ganesh in view of Klotz and Ho; claim 23 was rejected under § 103 over Ganesh in view of Klotz and U.S. Patent No. 6,678,701 (Garth); claims 24 and 25 were rejected under § 103 over Ganesh in view of Klotz, Garth, and U.S. Patent No. 6,567,816 (Desai); and claim 26 was rejected under § 103 over Ganesh in view of Klotz, Garth, Desai, and U.S. Patent No. 6,151,601 (Papierniak).

REJECTION UNDER 35 U.S.C. § 112, ¶ 2

Claims 8 and 18 have been amended to address the rejection. Note that the amendment is made to improve the form of claims 8 and 18. The scope of claims 8 and 18 has not been narrowed by the amendment. Withdrawal of the § 112 rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 101

Independent claims 1, 5, 8, 12, and 22 have been amended to address the § 101 rejection. Each of claims 1, 5, and 8 now recites a method that is performed by software embodied in a computer-readable storage medium and executed by a computer. Claim 12 recites that the article includes at least one computer-readable storage medium that contains instructions that when executed cause a computer to perform the recited acts. Claim 22 recites that the controller of the first system includes one or more processors to perform the recited tasks.

In view of the amendments, withdrawal of the § 101 rejection is respectfully requested.

REJECTIONS UNDER 35 U.S.C. §§ 102 AND 103

Independent claim 1 was rejected as being anticipated by Ganesh. It is respectfully submitted that amended independent claim 1 is not disclosed by Ganesh. Claim 1 now recites receiving modification operations that modify at least a first base relation and a second base relation of a join view, and performing partitioning by submitting at least some of the modification operations operating on the first base relation to a first session, and submitting at least another of the modification operations that operate on a second base relation to a second session. Claim 1 further recites that the at least some of the modification operations in the first session operating on the first base relation are grouped into a first transaction.

The submission of modification operations to different sessions and grouping of certain modification operations in a particular session are not disclosed by Ganesh.

The other cited references also do not teach or suggest the claimed subject matter missing from Ganesh. For example, the Office Action asserted that Ngai teaches the concept of a number of sessions. *See* 9/28/2006 Office Action at 7. However, note that the cited passage of Ngai indicates that the number of sessions is the number of users who may use a database at one time according to a license for a database system, or the number of sessions that is based on a system parameter to limit the number of concurrent users for performance reasons. However, nowhere in Ngai is there any suggestion of the performance of partitioning of received modification operations by submitting different modification operations to different sessions, as recited in claim 1.

The Office Action also cited ¶ [0046] of Lou pertaining to transactions “made during the database sessions.” 9/28/2006 Office Action at 9. The cited passage of Lou refers to retrieving session identifiers associated with a user, names of tables having transactions made during sessions, and other information. However, nowhere in Lou is there any suggestion of performing the partitioning of received modification operations by submitting different modification operations to different sessions.

The Office Action also cited Ho as disclosing grouping “actions” into a series of transactions. *See* 9/28/2006 Office Action at 9; Ho, ¶ [0005]. Note that claim 1 recites grouping the at least some of the modification operations in the first session operating on the first base relation into a first transaction. This is contrasted to the teaching of Ho, which states that actions

are grouped into a *series* of transactions (*i.e.*, plural transactions). There is no teaching or suggestion in Ho of grouping multiple modification operations into one transaction.

Therefore, it is respectfully submitted that claim 1 is non-obvious over the cited references.

Amended independent claim 12 is similarly allowable over the cited references.

Independent claim 19 has been cancelled, without prejudice, to render the rejection of the claim moot. Claim 22 has been amended from dependent form to independent form, with the scope of claim 22 broadened from the original scope of claim 22.

Claim 22 was rejected as being obvious over Ganesh, Klotz, and Ho. Note that although the introductory sentence of claim 22 indicates rejections over Ganesh, Klotz, and Findleton, it is noted that the body of the rejection of claim 22 refers to Ho, not to Findleton. Therefore, Applicant is treating this rejection of claim 22 as being over Ganesh, Klotz, and Ho. As explained above, Ho does not teach or suggest grouping modification operations on a set of one or more tuples of a first base relation into *a* transaction (not singular sense). Ho teaches grouping actions into a series of transactions (note plural sense). Therefore, since the hypothetical combination of Ganesh, Klotz, and Ho does not teach or suggest all elements of claim 22, it is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claim 22. See M.P.E.P. § 2143 (8<sup>th</sup> ed., Rev. 5), at 2100-126.

Claim 5 has been amended from dependent form to independent form. With respect to claim 5, the Office Action conceded that Ganesh does not disclose the final three tasks of claim 5: receiving a third modification operation, storing the third modification operation, and scheduling the third modification operation. 9/28/2006 Office Action at 6. However, the Office Action cited Findleton as disclosing this feature, and in particular, to Fig. 4, the Abstract, and ¶ [0040] of Findleton. The Abstract of Findleton states that transaction requests are added to an execution queue *in order*, and that all read transaction requests can be retrieved and executed in parallel, *up to* a write transaction request on the data element. The write transaction request is then executed while all incoming read transaction requests for the same data element are queued until the write transaction request is completed. Paragraph [0040] of Findleton states the same thing. Nowhere in Findleton is there any suggestion of scheduling a third modification operation for execution in the database system *ahead* of the second modification operation that is in the

queue. Therefore, the hypothetical combination of Ganesh and Findleton does not teach or suggest all elements of claim 5.

Claim 8 has been amended from dependent form to independent form. Claim 8 was rejected as being obvious over the asserted combination of Ganesh and Cochrane. The Office Action conceded that Ganesh does not disclose the recited predefined lock placed on the join view. 9/28/2006 Office Action at 10. However, the Office Action cited Cochrane, and in particular, the U-lock of Cochrane, as disclosing the predefined lock recited in claim 8. As explained by Cochrane, its U-lock is compatible with S-locks, but not with other U-locks. Cochrane, 8:57-58. In other words, since the U-lock conflicts with itself, the U-lock of Cochrane cannot satisfy the recited requirement in claim 8 that the predefined lock placed on the join view does not conflict with another predefined lock placed on the join view. Therefore, the hypothetical combination of Ganesh and Cochrane does not teach or suggest all elements of claim 8.

Dependent claims are allowable for at least the same reasons as corresponding independent claims. In view of the allowability of base claims, it is respectfully submitted that the obviousness rejections of dependent claims have also been overcome.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 14-0225 (11338).

Respectfully submitted,



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